# OUR LARGE CHANGE: THE DENOMINATIONS OF THE CURRENCY

SUMMARY

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The recent appearance of "greenbacks" in one and two dollar denominations and the repeal by Congress during the last session of the provisions which limited the issue of national bank currency to denominations of five dollars or over have served to attract attention to the changes that have been going on during the past few decades in our money of small denomination — "large change" as Professor Taussig called it.[1] It may be of interest, therefore, to review briefly what has been taking place.

In Professor Taussig's *The Silver Situation in the United States* [1] can be found a study of the general monetary situation in this country as that situation developed under the so-called Bland-Allison act of 1878 down to and including the Sherman Silver Purchase law of 1890. Much detailed discussion concerning denominations and the like is included in Professor Taussig's study, and the present brief survey might, therefore, not inappropriately begin at the year 1890.

[1] The Silver Situation in the United States, 1896.

Yet Professor Taussig's study had a much broader interest than that which constitutes the justification for this paper, and in his study the particular question of our "large change" is, therefore, properly discussed only in its wider implications. The present inquiry is concerned with all the varied readjustments that time and other historical exigencies have made necessary in our small denomination currency, and may begin *de novo* with the Civil War period.

It will be generally recalled that through the suspension of specie payments by banks and by the government, and through excessive issue, the greenbacks depreciated and finally succeeded in driving all metallic money, including fractional money, out of circulation — except on the Pacific coast, where by common consent gold rather than greenbacks were used in general exchange. At that time, however, the Pacific coast was practically an isolated area. The 10 per cent tax on state bank note issues had effectively driven state bank notes from the field. The state bank notes were supplanted, however, by national bank notes, the "cash" reserves for which, in so far as the 5 per cent redemption fund could be regarded as a cash reserve, was made up of greenbacks. The cash reserves against deposit liabilities were also made up largely of greenbacks, altho some of the larger banks regularly kept on hand a supply of gold. The act of February 12, 1873 authorized the coinage of the so-called "trade dollar," intended for exportation to the Orient, where it was to compete with the Mexican dollar. Trade dollars were at first made legal tender within the United States in sums not exceeding five dollars, but the tender qualities were withdrawn in 1876. Only a few got into domestic circulation. Currency in general circulation from the Civil War down to the Bland-Allison act of 1878 was made up, there-

fore, of United States notes or "greenbacks," national bank notes,[1] and a few trade dollars.

The first act authorizing the issue of greenbacks was that of February 12, 1862.[2] It provided for the issue of $150,000,000 in United States notes, fifty millions of which were in lieu of an equivalent issue of demand notes authorized the year before. The new notes were to be of such denominations as the Secretary of the Treasury might "deem expedient, not less than five dollars each." Demand for currency in denominations below five dollars was presumably to be met partly by such gold as was in circulation and by state bank notes.[3]

A further issue of one hundred and fifty millions in greenbacks was authorized by the act of July 11, 1862.[4] This act provided that the Secretary of the Treasury might use his discretion in determining the denominations, provided that no notes were issued for the fractional part of a dollar, and that not more than thirty-five

[1] Demand notes issued in five, ten, and twenty dollar denominations from August, 1861, to March, 1862 to a total of fifty millions, which were redeemed in gold, are not specifically mentioned because when greenbacks depreciated, the demand notes disappeared from general circulation as promptly as gold itself.

[2] Publications of National Monetary Commission, vol. ii, p. 165.

[3] The coinage of silver dollars, stopped in 1805, was resumed in 1836. Some were coined in 1837 and 1838, but from 1839 down to the demonetization of silver in 1873, there was only one year (1858) when some silver dollars were not coined. The amount coined, however, was small, exceeding a half million dollars per annum only in 1859 and 1860. See U. S. Treasury Circular No. 52, pp. 52–60. Gold was steadily coined at the government mints despite the war. Total coinage of gold during the war was as follows:

| | |
|---|---|
| 1860 | $23,474,653 |
| 1861 | 83,395,530 |
| 1862 | 20,876,007.50 |
| 1863 | 22,445,482 |
| 1864 | 20,081,415 |

Most of this gold stayed in the hands of the banks, however, and did not appear in circulation.

State bank notes in denominations under five dollars had for decades been a source of trouble, and attempts were made to suppress them. They were needed, however, and despite frauds and losses public opinion seems to have sustained them. See Davis R. Dewey, State Banking Before the Civil War (Pub. Nat. Mon. Com., vol. x, pp. 63–79).

[4] Pub. Nat. Mon. Com., vol. ii, p. 639.

millions were in denominations lower than five dollars. By joint resolution, January 17, 1863,[1] Congress authorized a further issue of one hundred millions to pay the men in the national forces. Express authority was given to the Secretary of the Treasury to prescribe the denominations, "not less than one dollar." Similar authority was given to him in the act of March 3, 1863,[2] which permitted a net addition of fifty millions to the issues already authorized.

It will thus be seen that in the legislation authorizing the issue of the greenbacks there was at first absolute prohibition of denominations below five dollars. Then a concession was made in the authorization of a specified amount of low denomination bills. This was in turn followed by a lifting of all restrictions and by a grant of discretionary power to the Secretary of the Treasury in determining the denominations. The objection to small bills was little more than a prejudice carried over from state banking experience which had demonstrated that notes of small denominations not only tended to remain long in circulation but also tended to get more persistently into the hands of the poor and the ignorant than did the bills of larger denominations, so that in case of failure of the issuing bank, the weak and the defenseless were the harder hit. It is difficult to see how this probably rational objection to notes of small denomination issued by state banks had any bearing on the notes issued by the national government itself, especially in view of the fact that even the state issues of small denomination seem to have been vindicated in popular opinion.

The law of February 23, 1863, which established the national banking system, also prohibited issue of notes under five dollars. This law was superseded, however,

[1] Pub. Nat. Mon. Com., vol. ii, p. 641. [2] Ibid., p. 644.

by the act of June 3, 1864, which authorized the issue of banknotes in denominations of one, two, three, five, ten, twenty, fifty, one hundred, five hundred, and one thousand dollars. But again there was an important proviso, namely, " that not more than one-sixth part of the notes furnished to an association (national bank) shall be of a less denomination than five dollars, and that after specie payments shall be resumed, no association shall be furnished with notes of a less denomination than five dollars." [1] It would therefore appear that Congress believed that as soon as specie payments were resumed the bulk of the circulating medium in small denominations getting into the hands of the great mass of people should be jingling specie. The act of February 12, 1873 provided for the coinage of one dollar, two and a half dollar, and three dollar gold pieces, and the old silver dollar was completely dropped as one of the authorized coins. Hence in 1873 the specie that Congress had in mind for the small denominations must have been gold itself. But, of course, during the period of suspension the greenbacks and the national bank notes had to be relied upon. Down to 1879, when the issue of one dollar and two dollar national bank notes was discontinued, the total issues of one's equaled $23,169,677, and of two's $15,495,038. As the privilege of issuing notes in denominations below five dollars was not restored to national banks until October, 1917, the small notes began in 1879 gradually to disappear from circulation.[2] United States notes in one and two dollar denominations outstanding at the close of the fiscal year in 1878 totaled $41,840,822.[3]

During the period of years from 1878 to 1890 when the Bland-Allison act was in force, the coinage of silver

[1] Pub. Nat. Mon. Com., vol. ii, pp. 340–345.

[2] See table, pp. 264, 265. [3] See table, pp. 264, 265.

dollars, and toward the end of the period the issue of small denomination silver certificates, constitute the most interesting phases of the " large change " development. The act of February 28, 1878 (the Bland-Allison act) provided for the coinage of silver dollars as described in the act of January 18, 1837.[1] The dollars were to be full legal tender at nominal value " except where otherwise expressly stipulated in the contract." The Secretary of the Treasury was required to purchase not less than two nor more than four million dollars worth of silver a month and to coin it " as fast as purchased, into such dollars." Section 3 of the act provided that silver dollars might be offered to the Treasury in exchange for silver certificates in denominations " of not less than ten dollars each, corresponding with the denominations of the United States notes." The certificates were made " receivable for customs, taxes, and all public dues " and when so received could be reissued. The certificates were also made redeemable in silver on demand.

The purchase of silver bullion and the coinage of standard silver dollars began as soon as the act went into force. The Secretaries of the Treasury used the discretion accorded to them to keep their purchases down to the two million mark, but, as a glance at the table will show, the minting of the dollars went on steadily and the number that got into circulation increased rapidly. Silver certificates were issued at first only in the larger denominations, but the act of August 4, 1886, authorized the issue of one, two, and five dollar certificates and the exchange of such small denomination certificates for the larger denominations. This act was suggested by the monetary emergency which prevailed at the time. Surplus reserves had accu-

[1] Pub. Nat. Mon. Com., vol. ii, p. 579.

mulated in the banks, which had discriminated against the silver currency, especially in the East. Hence the tendency was for the silver dollars and the silver certificates to flow back to the Treasury. In the hope of keeping silver currency permanently in circulation, the Secretary of the Treasury in 1885 used the discretion vested in him with respect to the issue of greenbacks to stop the issue of denominations below five dollars.[1] That this was effective is shown by the fact that by the following year the one and two dollar greenbacks in circulation dropped over fourteen millions while the silver dollars made a corresponding gain. There was, however, a marked preference in various quarters for paper bills, hence the enactment by Congress of the act already referred to authorizing the issue of the small denomination silver certificates. The extent to which these small denomination certificates entered into general circulation is disclosed in the table.

The Sherman Silver Purchase law of 1890 included several provisions affecting small denomination currency. It withdrew from the Secretary of the Treasury the discretion in the purchase of silver bullion that had been vested in him by the Bland-Allison act, and required him to purchase four and one-half million ounces of silver bullion each month at the market price as long as the market price did not exceed $1 for 371.25 grains. In payment for such silver the secretary was to issue treasury notes "in such form and of such denomination not less than one dollar nor more than one thousand dollars, as he may prescribe." The notes were made redeemable in either gold or silver coin, at the discretion of the secretary, the law stating that it was the "established policy of the United States to maintain the two metals on a parity with each other upon the present

[1] See Taussig, op. cit., p. 30.

MONEY OF SMALL DENOMINATIONS OUTSTANDING

| Year | U. S. notes or greenbacks | | | Silver certificates | | | National bank notes | |
|---|---|---|---|---|---|---|---|---|
| | One dollar | Two dollar | Five dollar | One dollar | Two dollar | Five dollar | One dollar | Two dollar |
| 1878 | 20,930 | 20,911 | 54,670 | .... | .... | .... | 4,060 | 2,820 |
| 1879 | 18,210 | 18,093 | 54,107 | .... | .... | .... | 4,017 | 2,800 |
| 1880 | 20,332 | 20,353 | 65,433 | .... | .... | .... | 2,687 | 1,886 |
| 1881 | 22,646 | 22,244 | 69,569 | .... | .... | .... | 1,564 | 1,093 |
| 1882 | 25,721 | 24,623 | 67,343 | .... | .... | .... | 913 | 608 |
| 1883 | 27,736 | 25,524 | 71,150 | .... | .... | .... | 628 | 393 |
| 1884 | 26,660 | 24,898 | 75,553 | .... | .... | .... | 512 | 299 |
| 1885 | 24,952 | 25,295 | 75,998 | .... | .... | .... | 455 | 251 |
| 1886 | 17,604 | 18,204 | 85,629 | .... | .... | .... | 418 | 221 |
| 1887 | 8,797 | 9,009 | 95,065 | 13,979 | 8,906 | 7,728 | 398 | 205 |
| 1888 | 5,180 | 4,977 | 81,055 | 26,732 | 18,597 | 51,610 | 391 | 200 |
| 1889 | 3,715 | 3,351 | 58,335 | 27,908 | 20,238 | 85,580 | 377 | 190 |
| 1890 | 3,292 | 2,873 | 57,730 | 31,134 | 22,558 | 102,127 | 371 | 185 |
| 1891 | 3,390 | 3,316 | 57,527 | 29,065 | 19,234 | 110,070 | 367 | 182 |
| 1892 | 4,062 | 3,081 | 61,594 | 27,312 | 17,130 | 102,432 | 363 | 179 |
| 1893 | 3,396 | 2,852 | 62,202 | 22,855 | 16,023 | 94,002 | 360 | 176 |
| 1894 | 3,052 | 2,470 | 52,785 | 22,281 | 15,366 | 87,652 | 357 | 174 |
| 1895 | 3,185 | 2,580 | 54,321 | 27,242 | 16,667 | 88,263 | 355 | 172 |
| 1896 | 3,126 | 3,334 | 57,897 | 29,440 | 15,788 | 93,975 | 353 | 171 |
| 1897 | 3,073 | 2,849 | 57,475 | 31,064 | 18,123 | 101,736 | 351 | 169 |
| 1898 | 2,488 | 2,125 | 63,999 | 30,902 | 18,776 | 109,377 | 350 | 169 |
| 1899 | 2,261 | 2,112 | 73,798 | 40,742 | 22,992 | 106,895 | 349 | 168 |
| 1900 | 2,132 | 1,900 | 77,056 | 52,222 | 30,839 | 114,005 | 348 | 167 |
| 1901 | 2,040 | 1,675 | 51,393 | 59,356 | 36,500 | 175,709 | 347 | 167 |
| 1902 | 1,986 | 1,560 | 30,159 | 67,694 | 39,877 | 233,628 | 346 | 166 |
| 1903 | 1,949 | 1,505 | 18,214 | 79,300 | 44,590 | 264,025 | 346 | 166 |
| 1904 | 1,921 | 1,470 | 11,865 | 80,707 | 45,191 | 281,842 | 345 | 165 |
| 1905 | 1,899 | 1,447 | 8,649 | 90,105 | 48,189 | 284,972 | 345 | 165 |
| 1906 | 1,886 | 1,433 | 6,943 | 101,020 | 47,172 | 298,924 | 344 | 165 |
| 1907 | 1,875 | 1,421 | 6,620 | 108,051 | 55,024 | 289,605 | 344 | 165 |
| 1908 | 1,861 | 1,408 | 75,316 | 112,806 | 56,044 | 263,629 | 344 | 164 |
| 1909 | 1,850 | 1,396 | 87,965 | 124,141 | 56,280 | 246,010 | 344 | 164 |
| 1910 | 1,843 | 1,388 | 114,790 | 140,819 | 59,762 | 243,561 | 344 | 164 |
| 1911 | 1,837 | 1,382 | 151,748 | 150,477 | 60,579 | 224,543 | 344 | 164 |
| 1912 | 1,831 | 1,375 | 169,050 | 161,327 | 62,854 | 227,178 | 344 | 164 |
| 1913 | 1,827 | 1,371 | 194,808 | 178,855 | 66,160 | 219,065 | 344 | 164 |
| 1914 | 1,823 | 1,367 | 202,997 | 179,680 | 63,907 | 209,370 | 343 | 164 |
| 1915 | 1,820 | 1,364 | 202,123 | 174,838 | 59,749 | 182,869 | 342 | 164 |
| 1916 | 1,816 | 1,358 | 230,674 | 203,364 | 65,943 | 194,822 | 342 | 163 |
| 1917 | 11,712 | 10,261 | 227,647 | 215,103 | 63,565 | 176,129 | 342 | 163 |

AT CLOSE OF FISCAL YEARS, 1878–1917. (IN THOUSANDS)

| National bank notes | Treasury notes of 1890 | | | Total one, two, and five dollar currency | Total all denominations | Silver dollars minted | Silver dollars in circulation | Gold dollars minted | Year |
|---|---|---|---|---|---|---|---|---|---|
| Five dollar | One dollar | Two dollar | Five dollar | | | | | | |
| 93,909 | .... | .... | .... | 197,299 | 765,069 | 22,496 | 855 | 3 | 1878 |
| 95,977 | .... | .... | .... | 193,204 | 723,931 | 27,560 | 7,654 | 3 | 1879 |
| 100,578 | .... | .... | .... | 211,269 | 726,228 | 27,397 | 19,309 | 2 | 1880 |
| 99,962 | .... | .... | .... | 217,079 | 770,864 | 27,928 | 28,828 | 8 | 1881 |
| 97,450 | .... | .... | .... | 216,828 | 789,730 | 27,574 | 31,991 | 5 | 1882 |
| 93,594 | .... | .... | .... | 219,016 | 887,926 | 28,470 | 35,342 | 11 | 1883 |
| 87,250 | .... | .... | .... | 215,171 | 917,885 | 28,137 | 39,795 | 6 | 1884 |
| 81,172 | .... | .... | .... | 208,124 | 974,043 | 28,698 | 38,471 | 12 | 1885 |
| 83,283 | .... | .... | .... | 205,360 | 921,431 | 31,424 | 52,470 | 6 | 1886 |
| 78,116 | .... | .... | .... | 222,204 | 902,624 | 33,612 | 55,506 | 9 | 1887 |
| 72,427 | .... | .... | .... | 261,168 | 986,241 | 31,991 | 55,545 | 16 | 1888 |
| 59,166 | .... | .... | .... | 259,859 | 992,737 | 34,652 | 54,418 | 31 | 1889 |
| 52,014 | .... | .... | .... | 272,286 | 1,004,887 | 38,043 | 56,166 | .... | 1890 |
| 47,568 | 3,516 | 3,141 | 10,096 | 287,472 | 1,056,417 | 23,563 | 57,683 | .... | 1891 |
| 49,691 | 6,262 | 8,676 | 23,247 | 303,929 | 1,140,426 | 6,333 | 56,799 | .... | 1892 |
| 51,354 | 13,299 | 12,360 | 36,936 | 315,815 | 1,109,430 | 1,456 | 57,030 | .... | 1893 |
| 61,510 | 12,829 | 10,346 | 33,819 | 292,644 | 1,170,692 | 3,094 | 51,191 | .... | 1894 |
| 64,370 | 11,051 | 8,712 | 40,422 | 317,339 | 1,138,316 | 863 | 51,983 | .... | 1895 |
| 70,959 | 11,617 | 9,790 | 42,630 | 339,082 | 1,120,539 | 19,877 | 52,176 | .... | 1896 |
| 73,093 | 11,786 | 8,930 | 36,175 | 344,725 | 1,169,788 | 12,652 | 52,001 | .... | 1897 |
| 71,416 | 15,901 | 10,782 | 30,876 | 357,161 | 1,139,339 | 14,427 | 57,260 | .... | 1898 |
| 73,800 | 12,512 | 8,842 | 32,664 | 377,134 | 1,144,267 | 15,183 | 63,382 | .... | 1899 |
| 74,540 | 5,459 | 4,971 | 27,153 | 390,790 | 1,380,833 | 25,011 | 66,429 | .... | 1900 |
| 61,569 | 2,185 | 2,014 | 16,537 | 419,491 | 1,473,144 | 22,567 | 66,588 | .... | 1901 |
| 54,620 | 1,119 | 954 | 9,158 | 441,369 | 1,534,897 | 18,161 | 68,747 | 76 | 1902 |
| 61,799 | 771 | 613 | 5,035 | 478,313 | 1,654,374 | 10,344 | 72,391 | 175 | 1903 |
| 62,827 | 627 | 477 | 3,057 | 490,495 | 1,774,623 | 8,813 | 71,314 | 25 | 1904 |
| 68,473 | 548 | 404 | 2,123 | 507,320 | 1,835,620 | 578,354 | 73,584 | 35 | 1905 |
| 76,889 | 496 | 357 | 1,659 | 537,288 | 1,953,392 | Total | 77,001 | 19,809 | 1906 |
| 113,827 | 463 | 324 | 1,355 | 579,075 | 2,111,438 | .... | 81,710 | Total | 1907 |
| 147,594 | 434 | 298 | 1,144 | 661,044 | 2,345,087 | .... | 76,329 | .... | 1908 |
| 136,436 | 411 | 278 | 960 | 656,236 | 2,378,787 | .... | 71,988 | .... | 1909 |
| 139,864 | 395 | 262 | 842 | 704,036 | 2,419,553 | .... | 73,433 | .... | 1910 |
| 140,679 | 384 | 251 | 756 | 733,143 | 2,538,607 | .... | 72,446 | .... | 1911 |
| 141,565 | 374 | 242 | 688 | 777,003 | 2,619,173 | .... | 70,340 | .... | 1912 |
| 143,752 | 366 | 235 | 632 | 807,578 | 2,681,034 | .... | 72,127 | .... | 1913 |
| 137,196 | 360 | 230 | 585 | 798,022 | 2,674,740 | .... | 64,647 | .... | 1914 |
| 137,882 | 354 | 225 | 544 | 793,652 | 2,967,246 | .... | 64,647 | .... | 1915 |
| 116,944 | 350 | 221 | 508 | 873,470 | 3,509,153 | .... | 66,415 | .... | 1916 |
| 114,317 | 342 | 210 | 479 | 940,219 | 4,209,835 | .... | 71,825 | .... | 1917 |

legal ratio, or such ratio as may be provided by law." For approximately one year (until July 1, 1891) after the passage of the act the secretary was required to coin monthly two million ounces of the bullion into standard silver dollars, but thereafter only so much of the bullion was to be coined as might be necessary to redeem silver certificates.

The operation of the Sherman Silver Purchase law is now an old story. The currency was inflated at a time when the public revenue fell off, and doubt arose as to the possibility of the treasury maintaining at a gold value all the silver that poured into the circulation. Through the operation of an "endless chain" of redemption the Treasury repeatedly lost gold. During the fiscal year 1890–91, as the Treasurer of the United States remarks in his report,[1] "there was a net loss of forty-nine millions of gold, with a net gain of nearly forty-two millions of other money." During the following year, the increase in the currency was nearly double the average for the ten-year period 1880–90.[2] By April, 1893, the gold reserve in the Treasury dropped below $100,000,000 and the issue of gold certificates was suspended. The object of the suspension was to prevent people from presenting greenbacks and treasury notes for redemption in gold and then depositing the gold for gold certificates. When the issue of gold certificates was suspended, whatever gold came to the Treasury for exchange was paid for in notes and so strengthened the gold reserve.[3] In November, 1893, the Sherman Silver Purchase act was repealed.

The issue of treasury notes of 1890 in denominations under five dollars is shown in the table. A considerable

[1] Report of Treasurer, 1890, p. 12.

[2] Ibid., 1891, p. 17.

[3] Ibid., 1893, p. 9.

volume of these small notes remained in circulation until 1900. Large quantities would flow into the Treasury for redemption from January to June each year, but would be reissued during the last six months of the year, when the demand for hand-to-hand media, especially in the smaller denominations, tends to increase. The national bank notes in denominations under five dollars were practically a negligible quantity. In 1890, however, to try to keep them steadily in circulation, the reissue of small greenbacks was undertaken, and this issue continued down to 1898, by which time the emergency generated by the Sherman Silver Purchase act had passed. That it was the large denomination currency rather than the small notes which played the sinister part in the depletion of the government's gold reserve is shown in the following table, compiled from United States Treasury Reports, 1890–93.

| Denominations | Issued during year | Redeemed during year | Net increase | Net decrease |
|---|---|---|---|---|
| 1890 | | | | |
| $10 and under | 131,252,000 | 82,802,204 | 48,249,796 | |
| Over $10 | 113,890,000 | 124,740,364 | | 10,850,364 |
| 1891 | | | | |
| $10 and under | 134,168,417 | 97,192,396 | 36,976,021 | |
| Over $10 | 176,340,000 | 143,603,720 | 32,736,280 | |
| 1892 | | | | |
| $10 and under | 149,591,593 | 121,302,541 | 28,289,042 | |
| Over $10 | 227,135,000 | 177,112,610 | 50,012,390 | |
| 1893 | | | | |
| $10 and under | 173,486,106 | 155,035,940 | 78,450,166 | |
| Over $10 | 170,545,000 | 225,841,550 | | 55,296,550 |
| Total | | | 132,965,025 ($10 and under) | |
| | | | 16,601,756 (Over $10) | |

The coining of standard silver dollars dropped off greatly in the fiscal year 1891–92. This was due to the fact that the Sherman law required coinage, after July 1, 1891, only of so much of the silver as was needed

to redeem treasury notes presented for redemption. As the Treasury had adopted the policy of redeeming all kinds of currency in gold if gold were asked for, the demand in the redemption of treasury notes as well as of the other kinds of currency was for gold.[1] The silver dollars in circulation, as indicated in the table, remained approximately the same.

After the repeal of the Sherman Silver Purchase law in 1893 the situation, in so far as the small denomination currency is concerned, developed normally. The country was, of course, torn by the free silver controversy, but this had no special influence on the relation of small denomination currency to the larger. The channels of free interchange between large and small denomination currency were kept open. This is an important point in real elasticity of currency. Not only must there be flexibility in the volume of the currency but also in its denominational composition. Since all the currency under five dollar denominations was issued directly by the government itself, the burden of denominational elasticity had to be borne by the Treasury. Thus in his report of 1900 (p. 21) the Treasurer of the United States points out that:

"The Treasury is called upon every year to provide small denominations of paper to facilitate the movement of crops. A large part of this business is done by the deposit of funds with the Assistant Treasurer in New York for which payment is made by the Assistant Treasurer in New Orleans, St. Louis, or Chicago, respectively. In addition to the transfers through the Treasury, banks ship considerable sums to their correspondents by registered mail. . . . These conditions do not indicate

[1] For example: In the last three months of the fiscal year 1891–92 the Sub-treasury in New York lost $18,214,433 in gold and in net exchange for $6,589,925 in greenbacks, $9,873,985 in treasury notes, under two millions in gold certificates and the balance in national bank notes and silver certificates.

a lack of currency or of credit. The pressure is for particular denominations, those less than $20 and, in very large measure, those of $5 and below." Then as the small bills began to flow back to the banks large denomination bills were sought in exchange. This ebb and flow affected even the silver dollars. The outward flow of silver dollars was facilitated by the government because the Treasury paid their cost of transportation, but not that of paper currency.

The prosperity which characterized the latter part of the decade 1890–1900 stimulated an increasing demand for small denomination currency. In his report of 1900, the Treasurer (p. 21) notices that "In previous years, after the season's demands, haste has been exhibited to seek large notes in exchange for the smaller ones whose work is done. During the past twelve months this exchange has not reached previous proportions, but the Southwest and West have kept the currency, paid for the crops, and the Treasury has put out the largest denominations in decreasing ratio."

The gold standard act of March 14, 1900 had certain special provisions relating to the small denominational currency. Of course all the money in circulation was affected by the fixing of the gold dollar as the standard of value and by the requirement that all kinds of money be kept at a parity with this standard, but there were special provisions bearing on the volume and character of small bills. Section 5 of the act provided for the cancellation of the treasury notes of 1890. As fast as silver dollars were coined it was enacted that equal amounts of the treasury notes should be canceled. It was also provided that against the silver dollars so coined, silver certificates should be issued. Section 7 provided that after the passage of the law not more than 10 per cent of the total volume of silver certificates

should be issued in denominations over ten dollars, and that as long as this percentage was actually exceeded in practice certificates of large denominations should be replaced with those of small denominations whenever for any purpose the large denomination certificates were received by the Treasury. But this provision went further. It required the Treasury to fill the resulting gap left in the large denomination bills through a corresponding transformation of United States notes or greenbacks from denominations below ten dollars into those above that level.

As parts of the gold standard law the reasons for these provisions are not difficult to find. A fixed gold reserve of 150 millions was provided for the greenbacks, and those presented for redemption would be again paid out only in exchange for gold. If necessary, bonds were to be sold to keep the gold reserve from dropping below 100 millions. Hence the security of the greenbacks seemed established, and the possibility of their being again used in an endless chain process of draining gold from the Treasury was eliminated. They could therefore be safely confined to large denominations. There was, however, no special gold reserve for the silver certificates. They rested upon bullion which in terms of gold was declining in value. Their position manifestly needed whatever additional support could be provided. Experience proved that bills of small denomination tended on the average to remain in circulation longer than did those of large denomination. They were needed in actual exchange and were but infrequently employed in obtaining gold from the Treasury. Hence the obvious purpose of the gold standard law was to direct the whole currency demand for denominations below five dollars toward the silver currency. The quarter eagle, which alone definitely maintained its status, was hardly a factor in

general circulation. Similarly, owing to the restriction on the national bank notes, most of the five dollar bills in actual circulation were also expected to be silver certificates.

The soundness of this procedure is hardly open to question, but it left one thing out of account, namely the probability of an increased need for the smaller denomination notes with a limited supply of silver certificates to draw upon to meet such need. Yet almost at once the demand for the small denomination currency increased. The gold standard law had hardly been passed before complaints were heard that the supply of small bills was inadequate. In his report of 1900 (p. 15) the Treasurer states that " Since March 14 no issue from the Treasury has been made of such large denominations (silver certificates above ten dollars) but the return for redemption or in payments has been slow. Gradually they will be presented and will disappear, and their places will be taken by smaller denominations. These are much sought after from all parts of the country. Indeed requests are not infrequent that they may be furnished in return for gold."

From 1900 on, the demand for the small bills gradually increased. The demand is great from July to December and then recedes from January to June. In the active months the worn-out notes and those of large denomination are presented for redemption in small bills. The volume of these operations is referred to as follows by the Treasurer (Report, 1900, p. 16):

" To one who has not had the matter forced upon him, the immense mass of paper redeemed in the course of a year is nothing less than marvelous. . . . The paper issued directly by the government, owing to the broader use of smaller denominations, which wear out sooner than larger ones, reaches the division of redemption in

active months in the year compared with each other in an ever rising flood."

In 1902 the Treasurer remarked (Report, p. 152): "The demands of the people for notes of small denominations have surprised the closest students of the currency." He then points out that while in 1900 the average value of the paper currency issued by the government was $6.613, by 1902 it had been reduced to $4. By 1904 the Treasurer waxed even more eloquent. Witness the following:

"Experience in all recent years makes clear that the supply of small notes is hardly equal to the demand. . . . No rule can be set up by theory of the proper ratio of the several denominations to each other. The needs of business must be recognized and obeyed. Those needs clamor vociferously for small bills as instruments of local trade. The appeal is not confined to any particular district. It comes from the cotton and sugar regions as well as from the states which produce wheat and corn, cattle and swine. Cities and towns where the pay rolls for factories and furnaces are large assert the same urgency."

The Treasurer then adds that "Congress has it within its power to add to the volume of small denominations without inflating the currency." He recommended the issue of gold certificates in five and ten as well as higher denominations; the return to small denomination United States notes and the repeal of the law limiting the issue of national bank notes in denominations below five dollars.

In response to repeated recommendations of the Treasury, Congress passed, and on March 4, 1907 the President approved, a law aimed among other things to remedy the small bill difficulty. Section 1 of the act authorized the issue of gold certificates in denominations

as low as ten dollars instead of twenty dollars as provided in the gold standard law of 1900. The object of this authorization was to release ten dollar silver certificates and United States notes in order that they might be broken up into smaller denominations. In previous treasury reports attention had been called to frequent requests for small denomination bills in exchange for gold or gold certificates. Section 2 of the act authorized the Secretary of the Treasury to issue United States notes in denominations of one, two and five dollars, whenever in his opinion the supply of silver certificates in those denominations did not equal the demand. An equal amount of higher denomination greenbacks was, of course, to be retired. This restored to the Secretary of the Treasury the discretion that he had enjoyed down to the gold standard law of 1900. The gold standard law was based on the theory that the silver certificates had to be buttressed on the demand side, hence the monopolization for them of the largest part of the currency demand, namely that in the small denominations. But, as already indicated, it took only a few years to demonstrate that it was on the supply side that the small bills needed support. The demand for small bills tended almost steadily to increase after 1907. As was to be expected, the panic in the fall of 1907, with the attendant withdrawal of funds from the banks stimulated the demand unduly. In the fiscal year ending June 30, 1907, the increase in the bills from one to ten dollars was 4.8 per cent. In the following year the increase jumped to 12.9 per cent.[1] Thereafter the demand increased less rapidly, and, down to the outbreak of the Great War, no particular comment seems to have been elicited from the Treasury concerning the readjustment of the various denominations to meet changing demand.

[1] Report of Treasurer, 1908, p. 173.

During this interim a few of the developments are noteworthy. With respect to the greenbacks the policy of the Treasury was apparently to emphasize especially those of five dollar denomination. Notwithstanding the 1907 enactment, as the table will disclose, the one and two dollar greenbacks steadily diminished to the close of the fiscal year ending June 30, 1916. On June 30, 1907, five dollar greenbacks outstanding equaled $6,620,115.[1] By 1916 the volume had increased to $230,674,145. It was the silver certificates that were mainly relied upon to meet the demand for one and two dollar denominations. But during the fiscal year ending June 30, 1917, advantage was taken of the authority to issue the small denomination greenbacks. During that year there were issued $10,304,000 one dollar greenbacks, and $9,216,000 in the two dollar denomination. The fives and tens were largely drawn on to meet this need.[2]

Another development of some interest is the gradual reduction in the circulation of the standard silver dollars after 1907. Their circulation rose to its maximum in that year. To encourage the circulation the government had for years paid the transportation expenses on shipments of silver dollars whenever these coins were asked for. This entailed considerable expense, and several United States Treasurers grumbled about such coddling of silver. But by April, 1908, the appropriation for this free transportation of the silver dollar was exhausted and was not thereafter renewed. The shipping expense then devolved upon the consignees. The effect that this had upon the demand for silver dollars is disclosed in the following tables of shipments:

[1] Report of Treasurer, 1908, p. 231.
[2] Ibid., 1917, p. 69.

Shipments of silver dollars for the months indicated.[1]

| | 1907 | 1908 |
|---|---|---|
| April | $2,532,904 | $533,200 |
| May | 2,346,227 | 490,650 |
| June | 2,664,964 | 771,125 |
| July | 2,738,346 | 797,530 |
| August | 3,791,269 | 1,089,600 |
| Sept. | 5,262,743 | 1,524,500 |

The shipments by fiscal years are shown in the following table.[2]

| | | | |
|---|---|---|---|
| 1906 | $41,562,828 | 1910 | 14,384,734 |
| 1907 | 37,500,118 | 1911 | 14,060,535 |
| 1908 | 31,466,911 | 1912 | 11,841,874 |
| 1909 | 11,865,180 | | |

After 1912 the average shipments remained about twelve millions.

The Great War has of course profoundly affected the world's monetary arrangements. Before the outbreak of hostilities there had been a feverish accumulation of gold reserves by the European central banks. Credit was contracted, people everywhere were apprehensive, and strong tendencies toward hoarding both of specie and of currency were evident. This condition was reflected in an increased demand for hand-to-hand exchange media, especially gold and silver coin. While this demand was most pronounced in Europe, it was noticeably felt also in the United States. The actual precipitation of hostilities brought the situation to a climax. Practically all the belligerents suspended gold payments and initiated a more or less thinly disguised policy of bank note inflation. In the United States the issue of emergency currency and the organization of the Federal Reserve system sufficed to meet the pressure,

[1] Report of Treasurer, p. 178.

[2] Compiled from Reports of Treasurer.

except in the field of foreign exchange, where for a time matters were serious. However, the favorable development of our foreign trade soon began to attract gold to this market, and by the time we ourselves were drawn into the struggle our gold resources were unprecedentedly strengthened.

Since our own definite entry into the war the demand for small currency has not abated. War demands and the expansion of credit have steadily advanced prices. Larger sums are needed to effect the exchanges and the other operations dependent upon the use of hand-to-hand currency. In 1914 the Treasurer of the United States recommended to Congress what his predecessors had recommended, namely, the issue of gold certificates in five dollar denominations and the repeal of the provisions limiting national bank note issues to denominations of five dollars and above.[1] By 1917 the pressure had become severe enough to stimulate Congress to action. This pressure was mainly exerted by national banks in the West and South which asked as far as denominations were concerned for the privilege of exercising their own discretion in the issue of their notes. Congress yielded by repealing the provisions already alluded to, and the national banks are now free to issue their notes in any denominations that serve the convenience of their clients.

It is not probable that the national banks as a whole will avail themselves broadly of their new privilege. In times past the banks in the large centers have but partially employed their note-issue power. Moreover, the reluctance to issue notes of denominations as low as five dollars was so widespread that on several occasions the Treasury made special efforts to get the banks to issue a larger amount of their five dollar quota. But the coun-

[1] Report of Treasurer, 1914, p. 326.

try banker, who in the active seasons feels most severely the demand for small bills, is now to some extent fortified to meet it.

In the long run, to the extent that the fixed elements in the currency did not suffice to meet the demand for small denominations, it would have been better to rely upon Federal Reserve notes. They constitute now the elastic element in our currency, and as long as a member bank is sufficiently supplied with rediscountable paper it is possible for the bank to obtain the currency that it needs. But as elasticity implies flexibility in the constituent denominations as well as in the total volume, Congress will have to authorize the issue of the reserve notes in denominations below five dollars before these notes can be said to be completely elastic.

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